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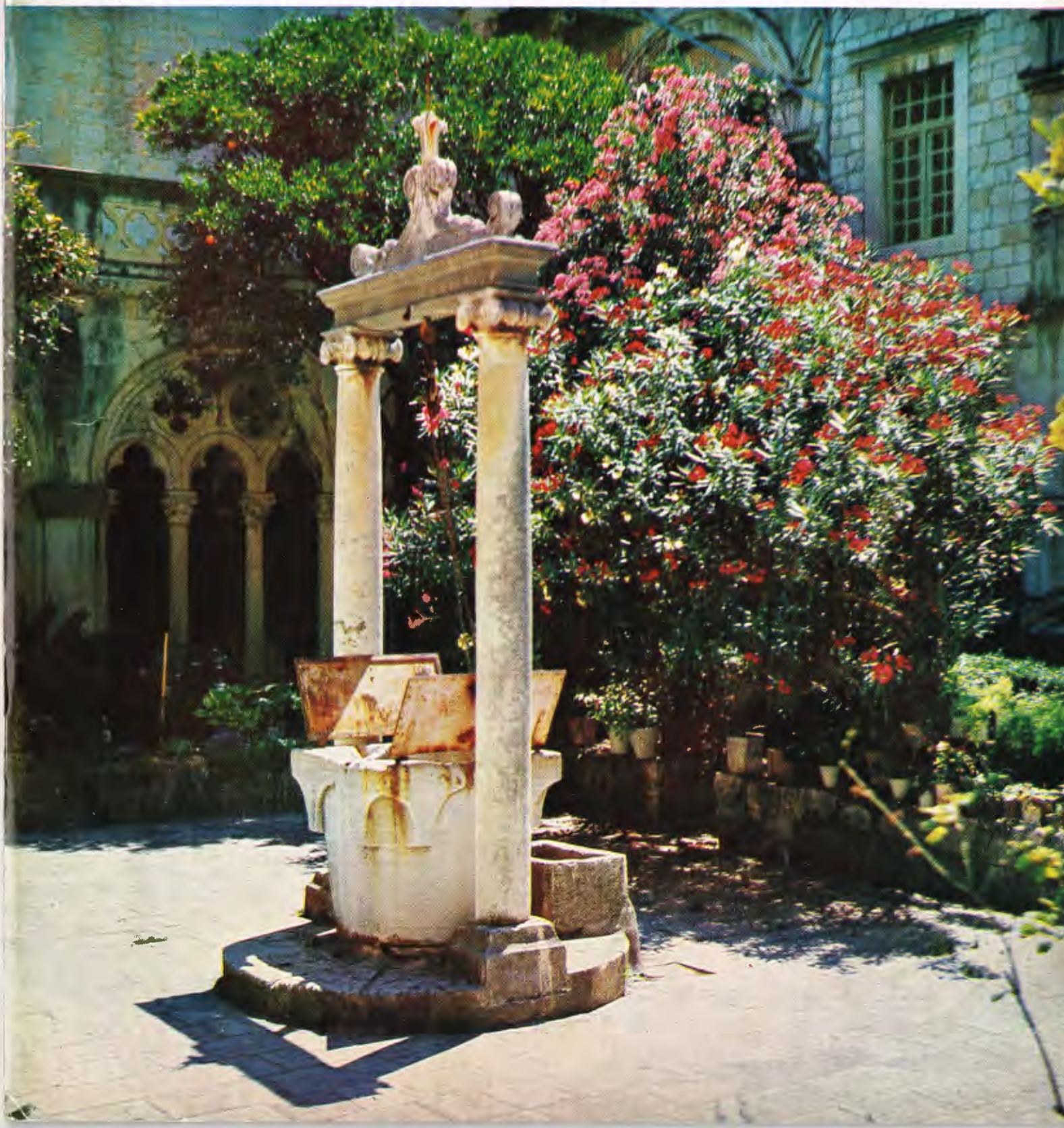

THE I.C.I. MAGAZINE

VOLUME 37 NUMBER 268 FEBRUARY 1959

The *I.C.I. Magazine* is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. It is edited by Sir Richard Keane, Bt., and printed at The Kynoch Press, Birmingham, and is published every month by Imperial Chemical Industries Limited, Imperial Chemical House, Millbank, London, S.W.1. Phone: VICtoria 4444. The editor is glad to consider articles for publication, and payment will be made for those accepted.

CONTENTS

FRONT COVER: *Oleander Tree, by E. B. James (Plant Protection)*

OUR CONTRIBUTORS

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Some Industrial Victoriana

By Norah Richardson

A search in the archives of I.C.I. has revealed some interesting examples of Victorian publicity. They are drawn from the period of great prosperity which surrounded Queen Victoria's Jubilee in 1887. Among them are some very early examples of the use of colour in the days when colour printing was still in its infancy.

A SEARCH among the archives for relics of the Great Victorian Age, when England (as Great Britain was usually called then) led the industrial world, is invariably rewarding. Usually it is for forgotten facts of social manners or industrial achievement that the historian is looking. An almost forgotten byway is a study of the efforts which the Victorian pioneers of industry made in those days to sell themselves and their goods to a world eager to learn and to buy. They are efforts which we in a more sophisticated age can look back on often with amusement, but also with admiration for the obvious pride and self-confidence behind it all.

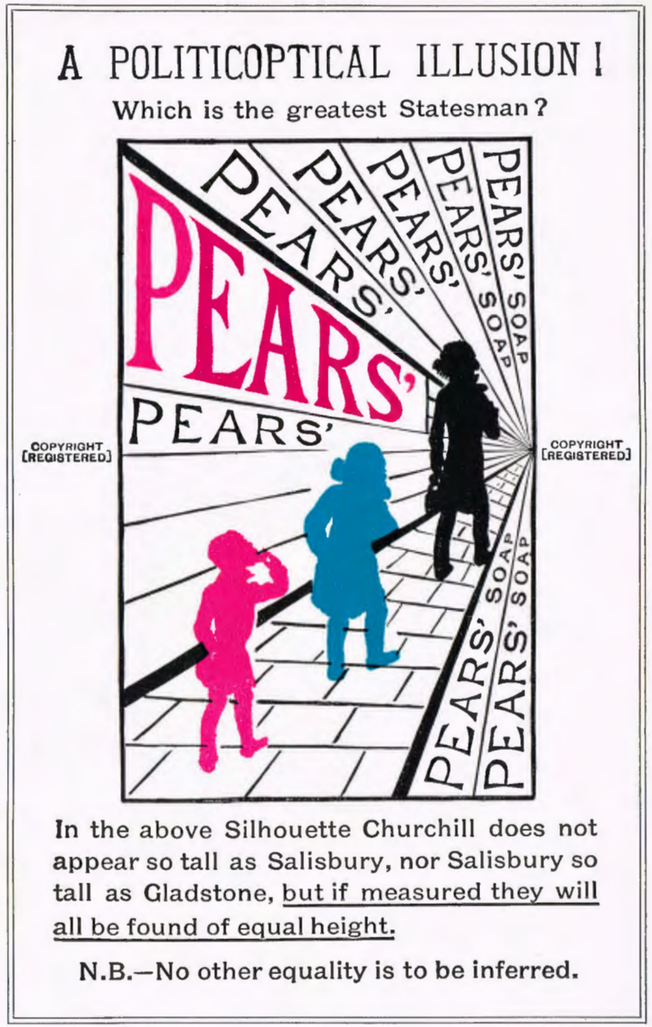
But first let me set the tone of those days. Let us set the year in 1887, the date of two of the illustrations, the year of the Jubilee of 1887, with its emphasis on our vast overseas empire and its almost illimitable resources. The grim date of 1914 was still far away in the future.

The world was gay and colourful, in spite of fogs, still penetrated by gas lighting only, except for the very new electric lights seen first in 1881 along the London Embankment. Indeed, 1881 was notable for another landmark. It was the year when the Post Office first issued licences for that new invention, the telephone.

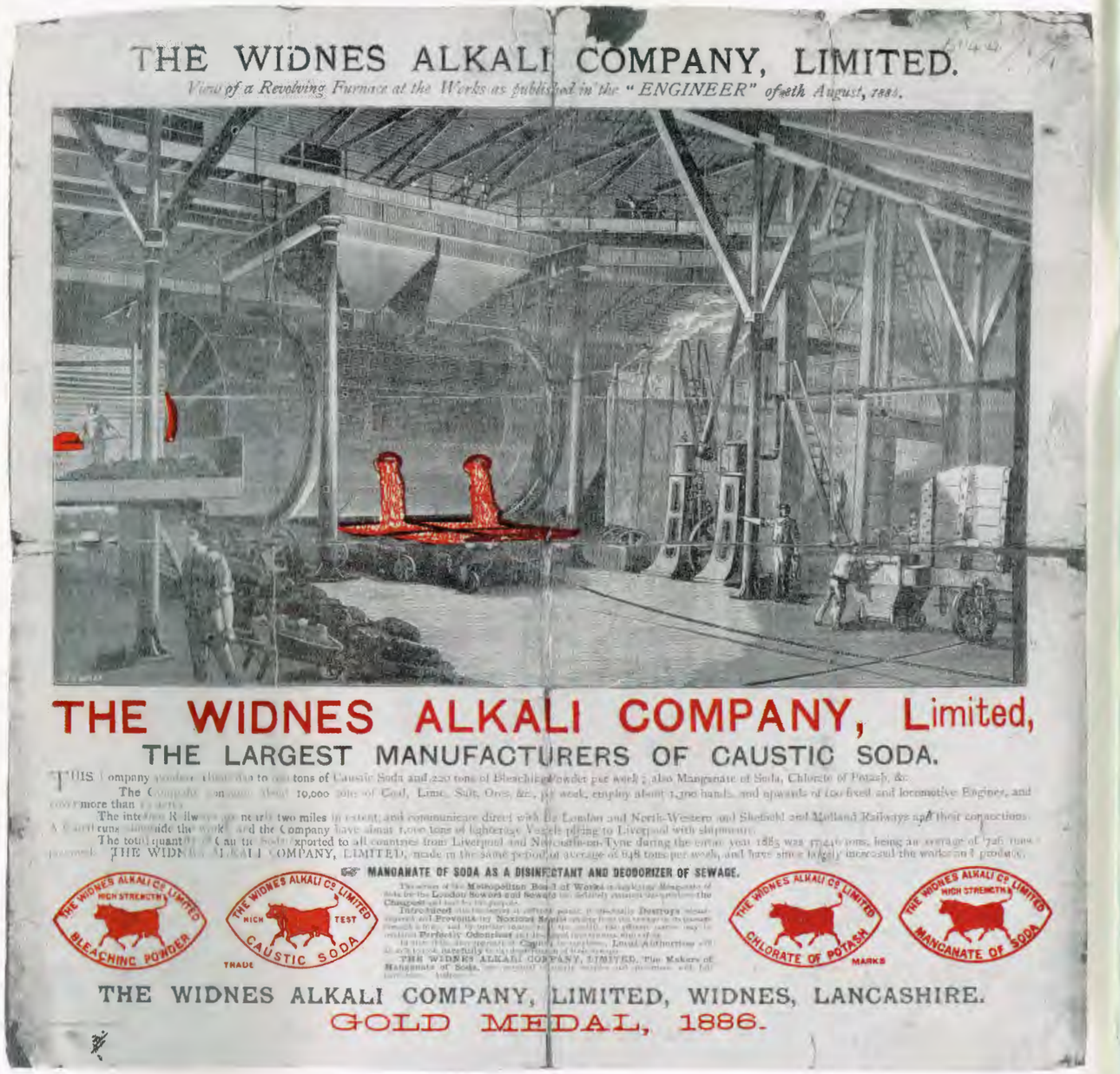
Traffic jams, like the fogs, were ever with us, and people travelled to work by the twenty-year-old Underground Railway, or walked to catch the many horse-drawn buses that plied the London streets. These were of the old knife-board variety, open-topped, where the best seat was by the driver, a gentleman with an inexhaustible fund of racy anecdote. Everywhere there clopped and clattered besides the dashing and romantic hansom cabs. When their inventor, Mr. Aloysius Hansom, died in 1882, there were 10,000 of his "patent safety cabs" in the metropolis. And threading already in and out of them all came that newfangled affair, the "safety bicycle," the shrill ping of its bell soon to become, in city street or along country road, one of the great background noises of the period.

The 1880-ites talked busily—of politics, of the theatre, and especially of their shopping and of industrial development generally. In Parliament, Gladstone—a great figure for the caricaturists, with his straight back, beaky nose and high wing collars—was just beginning his long battle for Irish Home Rule. Disraeli was not there to face him, but there was instead the solid Conservative figure of Lord Salisbury and, further to oppose and trouble him, the brilliant leader of what was known as the "Fourth Party," Lord Randolph Churchill, with the curling moustaches (Winston's father). The three politicians often appeared amusingly in the contemporary topical advertisement.

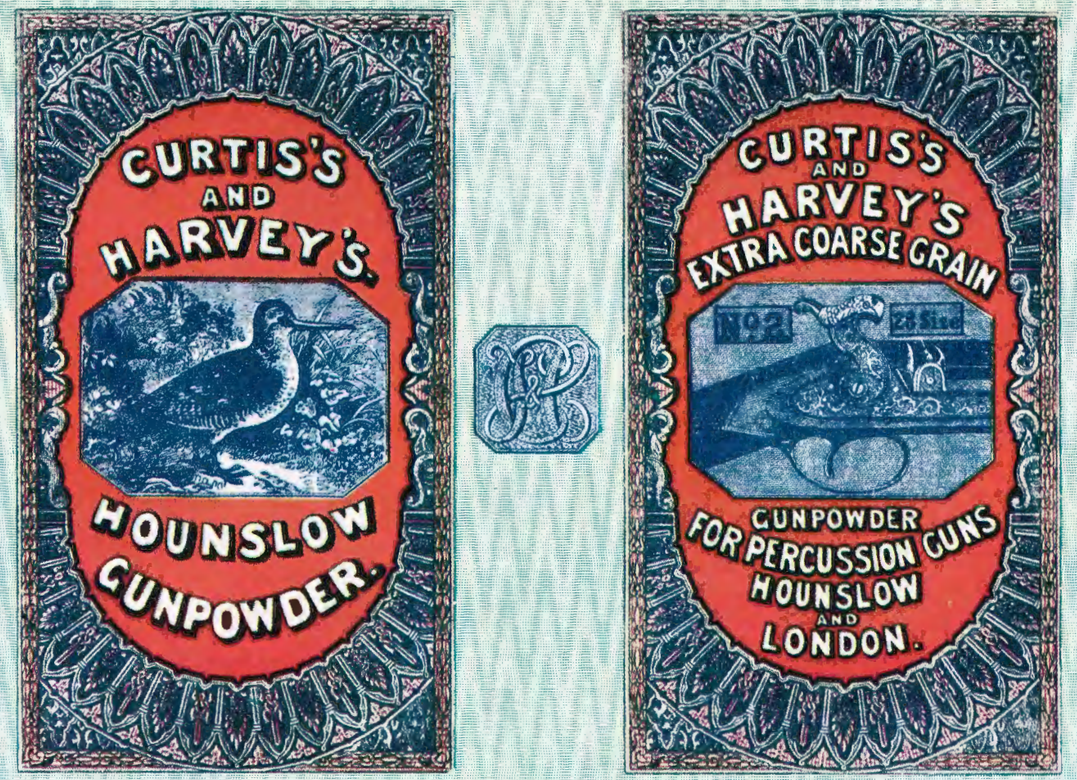
This was, too, a great age for the theatre. Everyone flocked to see Sir Charles Wyndham or the Bancrofts, and above all to the Lyceum for Henry Irving and Ellen Terry in their beautiful Shakespearian productions. The narrow passage in which you queued up for the old Lyceum pit was a famous place for chaff and backchat. And right through the eighties there ran the long series of Gilbert and Sullivan operas at the Savoy, from *The Pirates of Penzance* to *The Gondoliers*, their sparkling tunes forming yet more background music, while their catchwords ("What, never?", "Here's a howdy-do!" and so forth) were on everybody's lips.



A political advertisement *of* 1887. *It would be nice to think that the Churchill lampooned was Sir Winston, but it was of course his father, Lord Randolph. Pears' Soap advertisements believed in the repetition of the word Pears', this time with a pun on the French word* paire, *meaning equal.*



ABOVE: **An 1887 advertisement** *of the Widnes Alkali Co., depicting their famous "black ash revolver" discharging its molten contents. Sir Holbrook Gaskell has described the scene vividly: "The only lighting, apart from a few gas jets, was given by the stream of red-hot ash flowing into the bogies and the flickering flames of gas burning on the surface of the black ash as it cooled. Into and out of the areas of bright light and deep gloom moved the indistinct figures of the men . . . and there was a continuous background of noise, the rattle of the driving engines and winches with their gearing, and the clatter of iron wheels and clogs on the floorplates, punctuated by the shouts of the foreman."*



RIGHT: **A set of attractive gunpowder labels** *used by manufacturers in the last quarter of the nineteenth century. Already nitroglycerine based on Alfred Nobel's discoveries was threatening to displace gunpowder. The firms in these labels gradually amalgamated and finally in* 1918 *merged into Explosives Trades Ltd., later called Nobel Industries.*

A paints display card of 1879—*a very early example of colour printing. The card was issued for display in shops by the go-ahead firm of Blacklock and Macarthur, founded in Glasgow a year earlier. J. S. Macarthur, a man of boundless energy, was the driving force behind this firm (bought by I.C.I. in* 1943*), and their Stag Brand paints became famous far and wide—even penetrating the bazaar trade of India.*

The new journalism had arrived too, with George Newnes's *Tit-Bits* in 1880. And people were reading Rider Haggard's *King Solomon's Mines*, making their first acquaintance with modern detective fiction in Conan Doyle's *Study in Scarlet*, or waiting for each fresh volume of the brilliant verse and short stories of Rudyard Kipling.

Jubilee Year

When Queen Victoria's Jubilee arrived, the great year 1887 seemed to sum up a whole era, as the London crowds watched four kings, four crown princes, one archduke, and a varied assortment of lesser princes and potentates riding by to join them in homage to the little old lady in grey. Even in the topical advertisement the Jubilee had to have its place, as a symbol of long-established excellence, for fountain-pens or breakfast foods.

Victorian Display Techniques

What were the advertising and display techniques employed to appeal to this prosperous world? It is fascinating to study the efforts of the period to put over its goods. By the eighties a good deal had already been done in advertising approach. The poster (a smaller affair than it is today) was ancient and long-established. So was newspaper advertising: even in Cromwellian days you could have read in your little newsbook of strange new beverages, such as "Tay," or "the Drink called Coffee—a very wholesome and Physical Drink, helpeth Digestion, quickeneth the Spirits, maketh the Heart lightsome."

It was other varieties of advertising which were now developing in new and original ways. The conventional poster, the display card, and the attractive label on packages or bottles were much used. The poster was to be found on the sides of buses or on the walls of the great railway stations, where you could be tempted by anything from burglar-proof safes to silk hats at 4s. 9d. The display card appealed to you from behind the plate-glass shop windows or within the

(*Continued on page* 59)

ABOVE: **An advertising carriage** *for Kynoch soap in* 1900. BELOW: *An earlier advertising carriage of the* 1880*s and a well-known sight in London.*

FENWICK ALLISON

By Denzil Batchelor

THE second loneliest man in the world is the actor who forgets his soliloquy in a Command Performance of *Hamlet*. The loneliest is the man who plays full-back in a rugby international for his country. The reason the poor full-back is lonelier than a goalkeeper is that nobody charges goalkeepers, whereas a full-back is a target; he is there to be charged. You play the man, not the ball, when you reach him. And the sound of an oncoming pack of forwards bearing down on him must din in his ears like the line written by Andrew Lang with another magic moment in mind: "The surge and thunder of the Odyssey."

Fenwick Allison has been the loneliest man in the world. It happened when he played for England against Wales on 21st January 1956. "It was at Twickenham and a wet day," he told me when we lunched in Birmingham, where he is a graduate metallurgist in I.C.I. "Mike Smith tried a drop at goal. It was charged down. I fell on the wet ball as the Welsh wing three-quarter arrived, and it slipped from under me. They scored—and beat us 8–3 that day."

Since then there have been great days. It's a good thing Fenwick Allison is with a firm which is ready to give him time off for such occasions.

This slim, russet-haired 27-year-old came to the heights by the hardest and most roundabout path. To begin with, he liked soccer and feared and disliked rugby. He was educated at Dame Allan's School, Newcastle-on-Tyne, where rugby was played. They made him into a wing forward and gradually moved him further and further back, with the unspoken threat that if he didn't play rugger there would be no place for him in school cricket. Blackmail did it—he conquered his fears and won his place in the side. Today he believes in soccer until sixteen; then rugger—there are many who will agree with him.

England v. Ireland *at Twickenham*, 1956. *F.A. converts England's second try.*

At eighteen he was playing for the Northern Club and Northumberland while studying metallurgy at King's, Durham.

He was good material then, but he became a notable player only when he came to Birmingham four years ago, and for eighteen months shared a flat with two Internationals, Ian Swan and "Chick" Henderson. These two did what not all rugby players do—they trained. Allison had not the rugged individualism to loll at home. He found himself being magnetised into training too. There was only one end to this sycophantic behaviour: his game grew in stature until he was captaining Warwickshire to win last year's county championship for the first time since 1939, and playing for England in 1956, 1957 and 1958.

These rewards have been paid for. He broke his jaw playing for the Northern Counties against the South African Universities in 1956, finishing the match without having the faintest idea that there was anything wrong with him. He has cartilage trouble too, and at the moment is out of the game on this account. Most rugby players have functional hands that might have been of service in the stockyards or in boxing gloves. Allison's fingers are those of a violinist or a surgeon—long and slim, and with an eye at the end of each. They're ideal hands for catching a greasy ball; but even so, Allison is taking no chances. A *Times* third leader once immortalised him as being the only rugby player of his time to wear mittens on a wet day.

And how would I rate him? Below George Nepia, whom I thought the greatest full-back in the world playing for New Zealand at nineteen in 1923, and again the greatest full-back in the world defying a New South Wales side in 1937. Below Scott, of New Zealand, whom I saw kick a goal without boots from the half-way line in practice on the Eastbourne College ground on the last All Blacks tour. Below Dan Drysdale of Scotland, in the twenties, an arrowy figure with a deathly tackle.

Equal to any of the rest. A tackler to be trusted—absolutely. A magnificent kick: strangely enough, the only club he has regularly kicked for is England, a job which he inherited after converting seven tries in a county game. And utterly trustworthy. And a deadly fighter till the last whistle.

I'll have him on my side.

Photo: Daily Herald

ABOVE: **England v. Wales, 1957.** *F.A. getting clear with the ball.*
BELOW: **Midland Counties v. Australia, 1958.** *F.A. runs towards a tackle.*

Photo: Coventry Evening Telegraph

NUCLEAR ENERGY AND BERYLLIUM

Contributed by Metals Division

First titanium. Then zirconium. And now beryllium. These are the three "new" metals which Metals Division is now producing on a production scale. I.C.I. will soon have Europe's first wrought beryllium plant, and its importance for nuclear engineering is here explained.

THE first strange feature of this strange "new" metal beryllium is that it is not new at all. Metallurgists have known for many years that it has very useful properties—it is much lighter than aluminium but far stronger and harder—and that the addition of a small percentage of beryllium to copper makes an alloy six times as strong as pure copper—which is exceptionally hard-wearing.

But they have also known only too well the difficulties of producing beryllium as a wrought metal—problems associated with relatively meagre supplies of raw material (the semi-precious stone beryl); costly and laborious extraction processes; the special techniques needed to handle metal with certain singularly trying idiosyncrasies; and, not least, with the precautions necessary to overcome the toxic risks which powdered beryllium may present.

. . . very unusual combinations

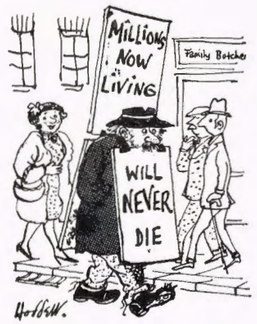
In these circumstances only a positive demand for wrought beryllium, and the conviction that no other metal would do instead, would have triggered off the long and expensive research effort needed to bring it into commercial production. Such a demand arose with the rapid development of nuclear engineering—an industry which continues to make unprecedented demands on the skill and inventiveness of the metallurgist.

In nuclear engineering it is often not sufficient for a metal to have the desired characteristics of, say, strength, corrosion resistance and good machinability. Usually it must combine some or all of these with certain extremely specialised properties which are significant only because of the unique conditions inside a nuclear reactor. As an instance of this, metals used to sheath the fuel must be as "transparent" as possible to neutrons, otherwise their presence will result in damping down the nuclear "fire."

The need for metals with such very unusual combinations of properties would be sufficient in itself to create plenty of headaches for the metallurgist. But there is an added complication. Nuclear engineering is developing so rapidly that specifications are constantly changing. Metals which were perfectly satisfactory for experimental reactors, or even for the first of the world's nuclear power stations, may be quite inadequate for service in reactors of more advanced design or of a different type.

It was precisely this situation which led to the emergence of beryllium as a specialised nuclear engineering material. Most people know that Calder Hall and the other nuclear power stations now being built in Britain are of the gas-cooled type, i.e. that the cooling medium inside the reactor is a gas, carbon dioxide. In a reactor like this, the metal used for sheathing the uranium must combine three specialised properties—compatibility with uranium, transparency to neutrons, and resistance to attack by carbon dioxide. Special magnesium alloys provided the answer.

But the next steps in improving the efficiency of gas-cooled reactors (and in producing cheaper power) involve operating at much higher temperatures—perhaps up to 600° C. against the 450–470° C. of current gas-cooled reactors. At these higher temperatures magnesium alloys are not strong enough, so a metal had to be found which not only had all the useful properties of magnesium alloys but retained them effectively at much higher temperatures. Of all the metals evaluated, beryllium was much the most promising, and the United Kingdom Atomic Energy Authority therefore specified this metal for fuel sheathing ("cans") in its advanced gas-cooled reactor.



. . . a brave man who would prophesy

Unusual Features

I.C.I. Metals Division has now been entrusted with the task of producing the wrought beryllium for these cans. The technical challenge of this project, which may be the birth of a new industry in this country, is one which Metals Division, with its exceptional research and development resources and long experience of nuclear engineering requirements, is well fitted to accept.

The plant under construction at Kynoch Works, Witton, is designed to produce semi-fabricated forms of the metal, such as rod, tube and plate. To safeguard people working there from possible toxic hazards it will be of unusual construction. An exceptional degree of air cleanliness will be maintained; there will be no windows; and heated filtered air will be pumped through the building at a rate of over 3 tons a minute. The plant will have its own messroom and amenities, and all the 150 employees will be issued with protective clothing.

On the processing side, too, beryllium production has its unusual feature. The raw metal supplied by U.K.A.E.A. will be melted under vacuum to produce an ingot—a technique already familiar to Metals Division through its work on titanium and zirconium. But with beryllium, melting is hardly more than a refining process. The cast ingot, which is "grainy" and has very poor workability, would not produce high-quality material if rolled or extruded directly, as conventional metals would be. So it is made into a fine powder, which is then heated under vacuum and compacted (sintered) to produce the various shapes required for further processing.

Future Prospects

The immediate future of I.C.I. wrought beryllium is settled. The plant will be in full operation in about twelve months' time, and its prime task will be the completion of the U.K.A.E.A. contract. Even at this stage, however, the longer-term prospects for this unusual metal provide interesting food for thought. It would be a brave man who would prophesy that beryllium fuel cans will be needed in substantial quantities for an indefinite period. Changes in design may once again shift the emphasis in the properties required for sheathing material; or the pattern of progress may dictate more rapid development of other types of reactor (cooled by water or liquid metal, for example) for which beryllium may not be the ideal material.

. . . unique conditions inside

There are, however, indications that beryllium may, by the time Metals Division is free to explore its commercial possibilities, have found some useful "non-nuclear" outlets. From the point of view of the engineering designer, the metal's most attractive property is its high strength/weight ratio; it is little more than half the weight of aluminium and very much stronger. Already there is considerable long-term interest in the metal among aircraft and missile designers, and it is reported that beryllium is being used for skinning in an American research aircraft designed to fly at seven times the speed of sound.

As with other metals, the time may come when supply creates its own demand. When the engineering designer realises that he has at his disposal a new and unique structural metal he may well regard it as a challenge to his ingenuity. The result could be entirely new conceptions of engineering design—and a promising if long-term commercial future for beryllium in Britain.

RUSSIA'S SEVEN-YEAR PLAN FOR CHEMICALS

By a special correspondent

Last November Mr. Khrushchev announced that, as part of a seven-year plan, the Soviet chemical industry would be trebled by 1965. *Here a special correspondent attempts to assess just what this means—both to the Russian people and to ourselves.*

RECENT utterances by top-level Soviet politicians about development plans for the Soviet chemical industry raise the question whether or not one may expect to see Russia in the near future entering the world market on a large scale and seriously competing there with the Western chemical leviathans. This question, like so many others about Russia, does not admit of a definite answer.

Mr. Khrushchev himself has made it very clear that there is, from now on, to be an intense concentration on the development of the chemical industry. He claimed that Russia at present occupies second place in the world in the production of chemicals, and also that in 1956 its volume of production was seven times greater than in 1937.

The comparable figures given by him for other countries are 4·1 times for the U.S.A., 3 times for Great Britain, 2·3 times for France and 2·1 times for the German Federal Republic. He went on to point out that in certain respects, notably in the output of synthetic fibres and plastics, Russia is still lagging seriously behind: indeed, he admitted that in these two fields his country occupies only sixth and fifth places respectively.

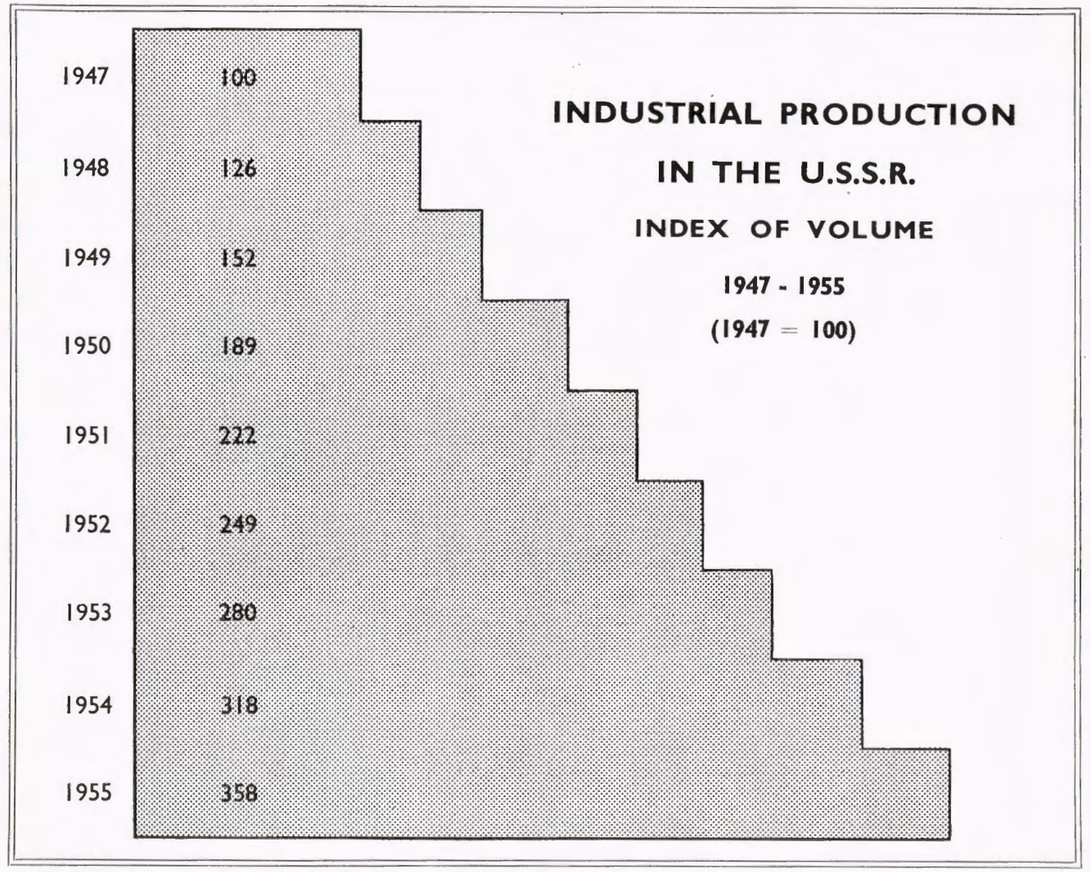
Part of the blame for the inadequacies are put on the former Ministry of the Chemical Industry, and, in the course of the far reaching reorganisation and regrouping which began in the middle of 1957, that Ministry has been dissolved and its place taken by a committee. However, in achieving the great expansion of chemical production now envisaged, mere reorganisation will presumably play only a very minor part: the main instruments are a programme of investment on a colossal scale and the buying of plants and know-how abroad.

This latter policy emphasises again something of which many British industrialists have long been aware: namely that the Soviet Union is usually more interested in them as purveyors of technical information than as sellers of finished products. That is not, of course, to say that there may not be a valuable market in Russia for British products, but it may well turn out to be in the fields of know-how and plant that the most interesting possibilities of Anglo-Soviet trading lie; and it seems probable that this may be particularly true where the chemical industry is concerned.

Mr. Khrushchev emphasised the readiness of the Soviet Union to buy equipment in capitalist countries, and mentioned in particular Great Britain, the U.S.A. and Western Germany. He justified this policy by saying that it will enable Russia to carry out its programme of expansion of chemical production without wasting time on designing plants and mastering production details. He clearly implied that the major part of Soviet buying of plant from abroad would be from East Bloc States; and, probably in order of importance, he mentioned the German Democratic Republic, Czechoslovakia, Poland and Hungary. However, there seems to be no doubt that for some time to come there will be a lively Soviet interest in buying chemical plants in the West. By one means or another Russian production is certainly going to be increased and extended, and every effort is going to be made to reach the target.

The buying of plants abroad may place some strain on Soviet foreign currency reserves, and an intensified effort to export is accordingly to be expected. Certain branches of the chemical industry, whose production is more or less adequate to Soviet needs, are likely to participate in this export drive; but artificial fibres and plastics, to whose production so much planning is now being devoted, can hardly in any foreseeable future figure seriously among Soviet exports.

The unsatisfied needs of the Soviet population in those fields are enormous and have been publicly mentioned by high-level spokesmen. The potential domestic demand must be virtually insatiable; and, in view of the importance now being attached to the raising of standards of life and to the provision of more and more amenities, it



seems most improbable that, even when present plans are fulfilled, any considerable part of Soviet productions of fibres and plastics will be used for export.

Most recent visitors to the Soviet Union agree that living standards are rising rapidly. If, as is usually the case, appetite comes with eating, there must surely be in the Soviet Union a growing demand for the refinements of life and for the various gadgets that come from the fibre and plastics industries.

Industrial development in Russia is no doubt conditioned by a system of priorities. If the chemical industry has hitherto been allowed to lag somewhat, that is presumably the result of a deliberate decision by the planning authorities to devote to it less investment. But if, as seems to be the case, it has now been decided to change that policy, it is prudent to expect a spectacular advance. However, in view of great domestic needs it does not necessarily follow that the Soviet chemical industry as a whole will become an important exporter.

In the East Bloc the chemical industry may perhaps be stimulated by closer co-ordination. It is doubtful whether there has been much co-ordination in the past. A tightening up in this direction would seem to be a practicable and reasonable policy.

To judge by press reports, a great deal of activity is going on in the East Bloc. There are, for instance, reports of the setting up of a coal hydrogenation plant at Fushun in China with equipment supplied by the Soviet Union, and Peking radio has recently announced that China plans to start seven synthetic fibre plants in Shanghai this year. Among the products in question are said to be 'Terylene,' nylon and Orlon. It is also said that China has ordered a number of oxygen plants and four nitrogen fixation plants from Czechoslovakia.

These things are of course not in themselves evidence of a centralised co-ordination of chemical production, but none the less they are probably taking place in conformity with a plan.

THE COMPRESSOR

By S. Labrow (Billingham Division)

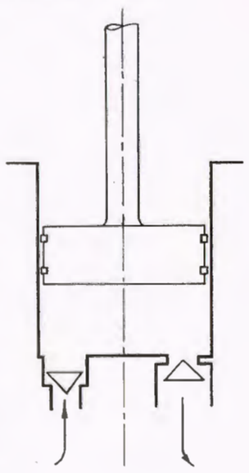
Some of the most important and widely used of modern chemicals—such as synthetic ammonia and polythene—are made by reactions which take place under very high pressures. The compressor, and in particular the high-pressure reciprocating compressor here described, thus plays a vital part in the modern chemical industry.

Compressors for air or gas are to be found in every Division—from small machines which handle only a few cubic feet per minute to giant compressors for several thousand cubic feet, from machines in which the delivery pressure is a few pounds per square inch to those which deliver the gas at over 20,000 lb. per square inch.

There are two main types of compressor. In one type the gas is first given a very high velocity, and the energy which it possesses by virtue of this velocity—kinetic energy, as it is called—is then transformed into pressure energy by slowing down the gas in a suitable manner again. In the other type, which this article deals with, the principle is simpler and is indeed basically nothing more than that of the ordinary bicycle pump.

Imagine a quantity of gas at, let us say, the pressure of the atmosphere contained in a cylindrical vessel closed by a tight-fitting piston which can be moved up and down. If the piston is moved downwards, the gas is squeezed into a smaller space and the pressure which it exerts on the piston and the sides of the vessel increases.

By how much will the pressure increase if, for example, we halve the volume? An Englishman, Robert Boyle, 300 years ago, was the first to attempt to answer this question. He found that, provided the temperature of the gas does not change, the pressure multiplied by the volume is always the same. This is known as Boyle's law.

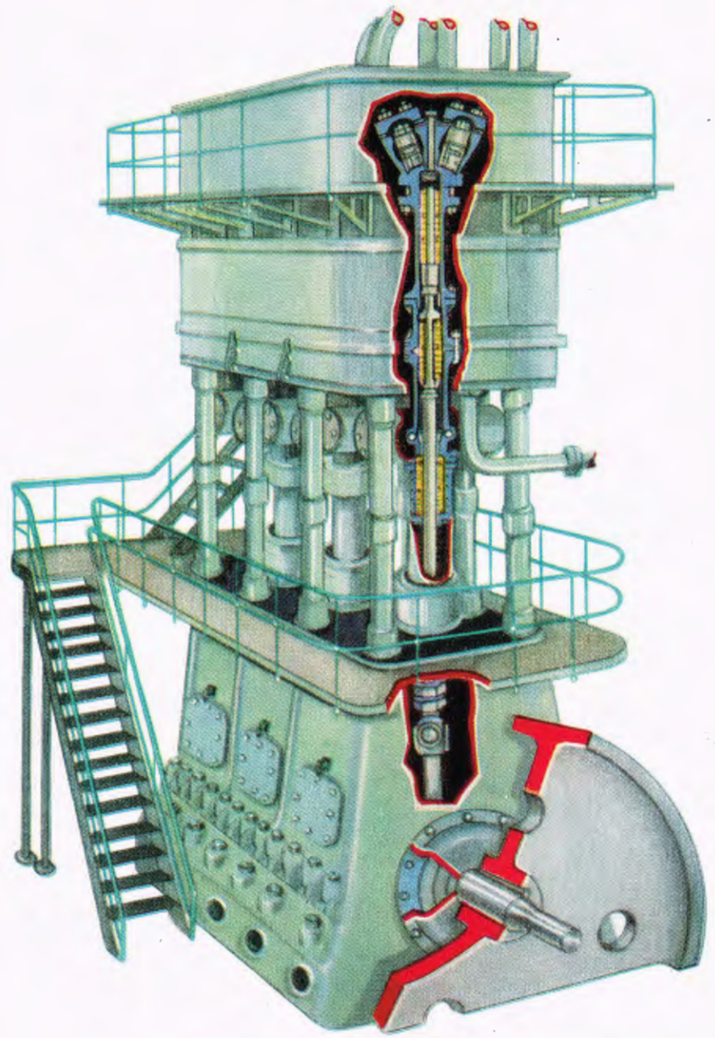


We now know that this "law" is only approximately true and that all gases deviate from it to varying degrees, especially at high pressures and also when they are approaching the condition in which they become liquid. It is thus most important for the design of a compressor for a given gas to know these deviations for that gas over as wide a range of temperatures and pressures as possible. Such information is available nowadays for most of the gases in which we are interested.

Let us now return to our cylinder and piston. If in the base of the cylinder we arrange a valve which will open outwards when the pressure in the cylinder has risen above a definite figure, we can push the gas out of the cylinder either into a vessel or pipe maintained at the fixed pressure or into another cylinder in which the gas can be further compressed to a still higher pressure. By providing a second valve designed to open inwards in the base of the cylinder, when the piston moves upwards again a fresh supply of gas can be drawn into the cylinder, so that all we have to do to make the process a continuous one is to provide some means of moving the piston continuously up and down—in other words, giving it a reciprocating motion in the cylinder. This can be done quite simply by an ordinary crank mechanism, and we have what is known as a single stage of compression.

Now we find in practice that there is a limit to the extent to which we can allow the pressure to increase in a single stage or, to be more accurate, to the ratio of the delivery to the suction pressure. This is because, when a gas is compressed, heat is generated; and mainly because of the effect of heat on the oil used to lubricate the cylinder and gland, there is a limit beyond which one cannot allow the temperature to rise. This in turn decides the best ratio of delivery to suction pressure in a single stage. At the present time the number of stages in high-pressure chemical processes is usually between four and six, and rarely exceeds seven.

The history of the high-pressure compressor goes back over 100 years; and the first commercial process to make use of it was that for the liquefaction of air to produce liquid oxygen. The most spectacular development, however, came early in the present century, when the process for making ammonia by bringing together at high pressure and temperature hydrogen and nitrogen was developed. About a decade later petrol was made from coal by subjecting it to the action of hydrogen, again under high pressure and temperature.



A Billingham high-pressure compressor—*a type in use for over 30 years. It stands about 25 ft. high and weighs about 100 tons.*

The illustration shows one of the giant high-pressure compressors installed at Billingham over thirty years ago for the synthetic ammonia process referred to above. These machines are unique in that they are the only large high-pressure reciprocating compressors which are driven by steam turbine through reduction gearing. Each of them handles nearly a million cubic feet of gas (measured at atmospheric pressure) per hour and compresses it to a pressure of about 4000 lb. per square inch and is driven by a steam turbine of over 3000 h.p. The Billingham compression plant contains twelve large machines and is the third largest in the world.

The cut-away view through one of the cylinders shows the elaborate arrangements which are necessary in high-pressure compressors to prevent gas leaking out of the cylinder via the piston rod where the latter passes through the cover. Many of the gases, such as hydrogen or ethylene, are highly inflammable; others, such as carbon monoxide, are toxic, so that means must be adopted for preventing them from leaking into the atmosphere. This is the function of the gland, the design of which can present a most important and thorny problem. I.C.I. has played a major part in solving the difficulties.

Undoubtedly the most interesting high-pressure compressors within the Company are those used for the manufacture of polythene, in which ethylene is compressed to a pressure of over 20,000 lb. per square inch. At such pressures there is the formidable problem of finding materials which will stand up to the high stresses. Methods and techniques of design which are satisfactory at lower pressures are no longer adequate, and every feature of the machine must be considered anew in the minutest detail. Many of these problems are incapable of being solved by calculation, and development is possible only by the slow process of trial and error. Alkali Division—who discovered polythene—have contributed much to the design of compressors for these very high pressures and have acquired a know-how of inestimable value.

The research chemist in his search for new products is already experimenting at pressures of over 100,000 lb. per square inch and is talking of still higher pressures. The experts in the Company believe that there are no insuperable difficulties in eventually designing a compressor for as much as 150,000 lb. per square inch by adapting and extending existing techniques.

ERRATUM. *In the illustration of the chlorine cell in our last issue the positive and negative electrical connections were wrongly labelled. The two legends should be transposed.*

The Summer Garden

By Philip Harvey

There are two ways of planting a garden. You can just put in the plants you like best and look on them as individuals; or you can aim to enjoy the overall picture, planting for a symphony of colour in a particular season of the year. Philip Harvey here writes on colour in the summer garden and his chosen blends of plant and shrub.

Photographs by Ivor Ashmore, taken in the garden of Mr. J. A. Murdocke at Brattles Grange, Brenchley, Kent

One of the joys of gardening is that there are very few hard and fast rules. Traditional methods of culture, however well they work, are not necessarily the only way to tackle particular operations. So it is with colour arrangements in the garden. Dogmatism in such cases is usually an indication of superficial thinking, as all right-minded persons must surely agree that colour associations are matters of taste, not fact. Bearing in mind these fundamentals, I would ask you to regard any recommendations or suggestions that follow in the same spirit as some people interpret the Ten Commandments—as ideals of conduct.

The conventional herbaceous border alongside a lawn, next to the main garden paths or as a frontage to shrubs and trees, has been criticised somewhat sharply by certain writers, who maintain that staking, removal of spent blooms, thinning of weakly shoots and periodic splitting up of various plants are time-wasting. We are also told that labour shortage prevents this.

A superb border. *Extreme right is the crimson-scarlet floribunda rose Frensham; centre is the yellow* Anthemis tinctoria, *Wargrave variety; in front is Nepeta Six Hills Giant.*

Another lovely border. *In front is the grey* Artemisia palmeri. *On the right the floribunda rose Masquerade with the yellow hybrid mask rose Danaë alongside.*

These arguments are, I suggest, unsound. Any gardener worthy of the name, or for that matter anyone with a hobby (whether it's breeding budgerigars, sketching scenery or even tickling trout), never grudges time and effort. As for the term labour shortage, this implies (quite wrongly) that most amateurs have reduced their complement of professional gardeners from say half a dozen to a single man, whereas most of us do our own chores. Again, is not the general tendency towards shorter working hours, which suggests that we shall all enjoy more leisure in which to garden?

One can, however, say that the average border, whether large or small, makes insufficient use of the more restful colours such as grey, mauve, lilac, lavender and white. I would be the last to decry the magnificent, even strident colours of modern lupins, delphiniums, phlox and others, but too often they contrast violently with their immediate neighbours. Colour *blends* are much more restful to the eye. But before discussing possible colour combinations there are some general planning pointers which will, I think, help you to achieve the maximum effect in the minimum space.

Although the tallest plants are generally placed at the back of the border, it is preferable to bring a few clumps of taller subjects like verbascum and helianthus to the middle. And those of medium height such as gaillardias, heleniums and lupins may be placed at the front.

Wherever possible, try to have at least three plants of each variety. Admittedly "drift effects" may be a

counsel of perfection, as the initial cost sometimes rules out threes. In practice, individual plants obtained from a good nurseryman can often be divided into two, or should this be impracticable they will nearly always split up after a season's growth. Low-growing plants such as geums, dwarf Michaelmas daisies and pinks are more effective when grown in fairly large groups, otherwise they give a somewhat patchy appearance to the overall picture.

There are, of course, certain perennials (probably best described as imposing) which are equally if not more pleasing when grown singly, as in groups they tend to lose some of their individuality. I refer to the taller kniphofias (red-hot pokers), anchusa Morning Glory and paeonies.

Greys, pinks and yellows. *The main planting is* Artemisia palmeri. *Growing up the porch is the yellow climbing rose Golden Dawn, and growing from the urn the ivy-leaved pelargonium, variety Galilee.*

The midget or miniature border is a useful alternative (where space is limited) to the standard, relatively narrow border. This enables one to grow a wide range of the shorter-growing perennials, i.e. those under 3 ft. tall. It is generally designed to be seen from both sides. Tall plants are excluded because they would spoil the effect.

I should add that the breadth of any border should be at least twice the width of the tallest plants. In small gardens the necessary width may be impossible —another reason for trying the midget border or plot.

There are no rules about the shape of midget borders. They can be rectangular, square, round, or an irregular shape. They are probably best made as islands at various points in the garden. One can include plants normally reserved for the rockery, such as aubrietias and gentians.

Mixed borders of perennials and shrubs can be most attractive, but some care is needed regarding the choice of suitable companions. The deeper-rooted perennials like aconitum (monkshood), anchusa, geum, gypsophila and so on are preferable, as shallow-rooting plants are often overtaken by the more vigorous shrubs. Lavender, rosemary and ericas (heaths) associate admirably with flowers, as they are not rampant and consequently the roots never extend over a wide area.

Both lavender and rosemary should be planted alongside mauve, blue or pink perennials. They dislike heavy, wet land and are happiest on light, warm soils. The grey foliage of lavender is pleasing at all seasons. Avoid the variety usually catalogued as Dutch lavender, as it is rather shy flowering. Munstead variety, which has deep lavender flowers and grows to about 15 in. with an equal spread, is particularly fine. It can also be grown as an edging, but remember that slugs and snails are seldom far away. Rosemary makes a taller plant than lavender—up to 6 ft. when it is really at home. The dark green, narrow leaves are silvery on the undersides and the flowers are greyish blue. Both these shrubs object to exposed, windswept positions.

Many borders, both large and small, suffer from an excess of yellow, which can be overpowering. Greys, however, make restful colour combinations. They are found in a number of plants, and by including a few in the border you can overcome the problem of associating yellow with crimson, scarlet, purple or pink.

Senecio greyii grows to about 4 ft. with grey foliage and bears small yellow daisy-like flowers in July. The Jerusalem sage (*Phlomis fruticosa*) has large, grey-green downy leaves and yellow nettle-like flowers in August. It succeeds on bone-dry ground, but must have perfect drainage. This species is a first-rate bee plant. Another silvery grey plant is the deciduous *Potentilla fruticosa* with its strawberry-like yellow flowers. It reaches 5 ft. when well established, and there is a delightful dwarf form, *P. f. mandschurica*, which is only 2 ft. high. The pure white flowers are very freely produced on purple stems.

A contrast in greens. *In the foreground are funkias* (Hosta sieboldiana), *with hydrangeas behind against a background of conifers.*

White will separate quarrelsome colours and can also be used as a foil, but it is easy to overdo this colour. *Vinca major variegata* is an attractive periwinkle with creamy-white, blotched foliage. It may be grown as a ground cover alongside the yellow shrubs already mentioned. Incidentally, could any flower be more handsome than that of the common blue periwinkle? If it were not so absurdly easy to grow it would surely be given pride of place on the rock gardens of all horticultural snobs.

A white red-hot poker sounds intriguing, and this spring I intend to plant the new Maid of Orleans in company with a red phlox such as Brigadier or Leo Schlageter. Maid of Orleans is not a dead white, having more than a suspicion of ivory, which should relieve any tendency to coldness.

People and events . . .

Sir Alexander opens I.C.I. House, Melbourne

I.C.I. House, Melbourne, Australia's tallest office building, was officially opened on 11th December by **Sir Alexander Fleck**. The first building to break Melbourne's old height barrier of 132 ft., it has been described as "as dignified a top hat as any city could wish to wear." It stands 275 ft. high, contains 3 acres of external glass, cost £A3 million and took two and a half years to build.

It was not every day, said Sir Alexander, that he was asked to travel 24,000 miles to declare a new building officially open. But the new I.C.I.A.N.Z. headquarters building, he considered, was not simply a Melbourne landmark—it was a landmark in the development of Australian manufacturing industry. "I.C.I. House is a pledge of confidence in Australia's future. While I am sure it was a wise decision to build on this scale, I realise that it was also a bold one; but it was the boldness that is nourished by confident hopes of the future."

* * *

In a brief outline of I.C.I.A.N.Z. development over the past thirty years Sir Alexander referred to the increase in—

Capital and Reserves—from £A2 million to £A26 million.
Employees—from 400 to nearly 7000.
Sales—from under £A1 million to over £A45 million.

Where three-quarters of the turnover thirty years ago came from imports, today nearly three-quarters comes from selling the products of I.C.I.A.N.Z.'s own plants and only a quarter from imports. But that quarter is of much greater volume than pre-war trade, and I.C.I.A.N.Z. is now I.C.I.'s biggest export customer.

For the Chairman, the official opening of I.C.I. House was the culmination of a busy sixteen days in Australia. His tightly packed programme included visits to no fewer than nine I.C.I.A.N.Z. establishments, to six universities, the Australian Atomic Energy Commission installations at Lucas Heights, a sheep station on reclaimed scrubland in Western Australia, the Australian Iron and Steel Company's works, and the new Clayton factory of I.C.I.A.N.Z.'s subsidiary BALM Paints Pty. As guest of honour he also spoke on the ABC nation-wide broadcast programme of that name.

Mr. E. A. Watts, the builder, Mr. K. G. Begg, Chairman of I.C.I.A.N.Z., and Sir Alexander Fleck at the opening ceremony

Verse for Worse

Miss Kathleen Paine of Fernhurst Research Station, stimulated by our January front cover, has written for the Editor a rhyme worthy of Hilaire Belloc:

I don't mind still life,
  But not when the knife
Has been busy at decapitation.
  I'd rather the lens
Were not focused on hens
  Upside down and without animation.
Don't think me non-U
  For holding the view
That this type of art is barbarian.
  It's just that besides
Not pleasing my eyes
  I happen to be vegetarian!

Small World says "Thank You"

Fibres Division have received from Barbados the following cable from Mr. Arnold Eiloart, leader of the "Small World" Expedition:

Fabulous 'Terylene' canopy would have kept us up for ever but for storm, and your four-ounce 'Terylene' fabric held our featherweight craft together half-way across the Atlantic and is still perfect. Thank every worker concerned. Eiloart.

Fibres Division contributed 'Terylene' for the balloon ropes and material for the craft. Hydrogen to fill the balloon was supplied by Billingham Division.

Death of I.C.I.'s Oldest Pensioner

"On the whole the world has treated me quite as well as I deserve." So spoke I.C.I.'s oldest pensioner, **Mr. Thomas Smout**, just a few weeks before he died in his 99th year. Born at Bilston, he joined Elliott's Metal Co. when he was in his early thirties and was Assistant Secretary at the time of his retirement in 1928. He well remembered the energy and foresight of two famous directors of Elliott's, Walter and Neville Chamberlain, and the mountain of work which his company's amalgamation with other firms and its merger with I.C.I. in 1928 caused in his particular department.

Mr. T. Smout

Father of three distinguished sons, Mr. Smout was more than willing to discuss his son Arthur's rise to fame (Sir Arthur Smout was chairman of Metals Division from 1936 to 1942 and Main Board director from 1942 to 1953) and was proud of Sir Arthur's son, Mr. J. K. Smout, who has just been appointed manager of the Holford Rod Mill at Witton. He was less forthcoming about his own achievements. His message to the young people of today was "Enjoy your life, don't fool it away." The remark was typical of this grand old man, who was respected by all and whose passing early in January is regretted by his many old friends and colleagues.

Auld Acquaintance

A record-breaking number of 670 pensioners (211 women and 459 men) from Birmingham factories of Metals Division attended the annual dinner on 3rd January. Some travelled from as far afield as Cornwall, Wales and Surrey for this very happy occasion.

The oldest pensioner present was Mr. Arthur Smith (92), who worked in the Pattern Shop for 40 years. A woman's age is always a tricky question, but our researches suggest that to Metals Division falls the honour of being able to claim the Company's oldest woman pensioner in Miss Jinny Beddows, who was 87 last November. She came to Kynoch's at the age of 14 and left on her 65th birthday after 51 years as a machine operator in the old Sporting Shop. Mr. Smith claimed the honour of giving Jinny a gentle peck on the cheek as he whispered "See you again next year."

Mr. A. Smith and Miss J. Beddows

Rock Salt Records

Why is it that salt is used on the roads in winter to get rid of snow and ice? The answer is that if it is applied soon after a snowfall it has the effect of lowering the melting point and inducing a thaw. Encouraged by I.C.I., local authorities last year built up record stocks of ground rock salt totalling over 60,000 tons during the summer and autumn last year to help keep Britain's roads safe this winter.

This is more than double the amount sold the previous year and no less than ten times as much as five years ago before Salt Division launched its publicity campaigns advocating pre-winter stockpiling.

Ground rock salt comes from I.C.I.'s mine at Winsford, the only working salt mine in the country. It is one of the cheapest types of English salt, and the grade sold for snow clearing also has the special virtue of storing in the open for long periods without caking into a solid mass. It is this which has overcome the old prejudice against storing snow-clearing salt in advance of winter.

As we go to press Salt Division has sold the whole of its production of rock salt for snow clearing up to mid-March, and plans are already in hand to produce much larger quantities over the next three years.

University Post

The appointment of **Dr. T. L. Cottrell**, Sir Ewart Smith's personal assistant, to the Chair of Chemistry at Edinburgh University brings the number of professors at that university who have spent part of their careers in industry with I.C.I. up to three. He joins Professor Stephen Watson (Agriculture), who was a research chemist at Jealott's Hill Research Station for sixteen years, and Professor

Dr. T. L. Cottrell

IN BRIEF

"Cardiac Arrest." A film on the technique for dealing with cardiac arrest by opening the chest wall and massage was chosen by the Duke of Edinburgh for the Royal Yacht's film library for his voyage to India. It was made for Pharmaceuticals Division by the Film Producers Guild.

New Subsidiary. For administrative reasons the Leathercloth Division was dissolved on 1st January and became I.C.I. (Hyde) Ltd. The new company, which is accountable to the Paints Division board, is carrying on all the present business of the Leathercloth Division.

Remote Control. Just before Christmas Ardeer's second Biazzi nitroglycerine plant was transferred to complete remote control. A system of mirrors and lenses working on the periscope principle permits hillmen in the remote control room to view given points in the nitrating room with yet greater safety.

Australia's Skyscraper No. 1. Public interest in I.C.I. House, I.C.I.A.N.Z.'s brand new skyscraper headquarters, has been so great that an open week was held recently, when members of the public were able to view the building after office hours. A charge of 2s. a person was made, and the proceeds went to the Lord Mayor of Melbourne's Fund.

Canteen mural. *Apprentice painters J. R. Short and T. Malley at work on one of the two striking murals that now decorate the canteen at Alkali Division's Avenue Works. The drawing was done by students at the local college of art and the apprentices added the colour.*

Kenneth Denbigh (Chemical Technology), a one-time I.C.I. research chemist at Billingham and in the Head Office Research Department. Dr. Cottrell, who is 35, holds a B.Sc. with first-class honours and a D.Sc. degree of Edinburgh University; he is also the son of a former lecturer in Technical Chemistry there.

On graduating Dr. Cottrell joined the Nobel Division Research Department, where in 1949 he became head of the physical chemistry section. It was work done in this department which won him in 1952 the Meldola medal, awarded each year to the most promising chemist under 30 by the Society of Maccabeans on the recommendation of the Royal Institute of Chemistry.

Two years ago he won first prize in the *Sunday Times* scientific essay competition with an essay on the problem of putting over science to the non-scientist. With the prize money Dr. Cottrell, a keen sailor, bought a set of 'Terylene' sails for his Dragon class yacht *Vodka*.

Dr. Cottrell will be remaining with the Company until next September. As Sir Ewart's personal assistant he has recently been working closely with the new Head Office Technical Department, and from April onwards he will work full-time with this department until he leaves us for Edinburgh.

Sweden honours I.C.I.

SHORTLY before Christmas Dr. Taylor, Group Director for Nobel and Metals Divisions, returned from Sweden with two rather unusual gifts. They are beautifully coloured and decorated ceramic urns presented by the Royal Swedish Academy of Engineering Sciences. The larger urn is a gift to the Company in recognition of the part which I.C.I. has played in the chemical industry; the smaller one is a personal gift by the Swedish Academy to Dr. Taylor himself.

"The only sufficiently important use I can devise for the urn is to put my own ashes in it," said Dr. Taylor in his speech of thanks.

Dr. Taylor's journey to Stockholm for this honour was not uneventful. Owing to fog he arrived three-quarters of an hour after the lecture he was giving on "Science in the Modern Chemical Industry" was due to begin. But all was well. He was met by an official of the Academy at the airport with the joyful news that the lecture had been postponed for two hours and was whisked off to Stockholm in good time.

He and Mrs. Taylor were also invited to the banquet given to the 1958 Nobel prizewinners, attended by the Swedish Royal Family. The banquet was on 10th December, the anniversary of the death of Alfred Nobel, who in 1871 founded the original company which has now become Nobel Division and where Dr. Taylor has spent all his working life.

A colour photograph of the urn presented to the Company will appear in our next issue.

'Terylene' goes on TV

A BIG publicity campaign for 'Terylene' is cooking. From next month we shall be hearing more about 'Terylene,' seeing more about 'Terylene' and reading more about 'Terylene' than ever before. March 15th sees the transmission of the first commercial in the first 'Terylene' TV campaign to appear in this country. There will be a series of 30-second advertisements each week from then on until Whitsun at peak viewing times from all ITV stations. The commercials are being backed by a strong advertising campaign in the press.

Expansion Plans in South Africa

AFRICAN Explosives and Chemical Industries, I.C.I.'s associated company in South Africa, recently announced a £5 million expansion programme. By the time it was completed, said **Mr. Guy Hughes**, A.E. & C.I. managing director, when he was interviewed on the subject on the radio, post-war developments in the company would have cost no less than £45 million.

To start with, it is intended to double the existing chlorine capacity at Umbogintwini to make provision, among other things, for all the p.v.c. plastic South Africa is likely to need for some time to come. Besides this, A.E. & C.I. plans to undertake at Modderfontein Factory the manufacture of methyl alcohol—used as a booster fuel for aircraft—formaldehyde, urea-formaldehyde resins and polythene, none of which are at present manufactured in South Africa.

These expansion plans are in addition to a programme now well under way, involving in the main increases in ammonia and nitric acid production at Modderfontein.

Spotting the Flaw

AN interesting development at the training centre at Wilton, opened by **Sir Ewart Smith** in April last year, is a new scheme for the training of that growing and increasingly valuable class of craftsman, the instrument artificer.

Under this scheme trainee instrument artificers are given practical experience in fault-finding, using a mock-up of chemical plant which will reproduce the kind of faults likely to be met with on occasions on the plant, often at severe cost in loss of quality of make. The trainee can thus see for himself what actually happens if factors like temperature or pressure get out of control, and gain experience of finding the fault quickly and putting matters right.

There are two classes of people going through instrument artificer training at Wilton. Firstly, apprentices, who have up to three months on this special training before going to the works, returning at intervals for periods of a month or so. Secondly, existing craftsmen—electrical or mechanical fitters—being converted to instrument artificers. Like the apprentices they too take their training in small bites, because there is so much to absorb.

APPOINTMENTS

Some recent appointments in I.C.I. are: **Alkali and Chemical Corporation of India:** Mr. C. A. Pitts, Director. **Dyestuffs Division:** Dr. T. Richardson, Director. **Fibres Division:** Dr. J. Y. Baxter, 'Terylene' Works Manager, Wilton; Dr. E. R. H. Davies, Production Manager. **Head Office:** Mr. A. B. Patrick and Mr. G. H. Wills, Assistant Heads of Pensions and Assistance Funds Department. **I.C.I. (Hyde) Ltd.:** Mr. H. A. D. Perry, Managing Director. **Metals Division:** Mr. E. A. Bolton, Technical Manager, Kynoch Works; Mr. G. F. Middleton, Factory Manager, Elliott Works; Mr. J. K. Smout, Manager, Holford Rod Mill; Mr. W. T. Slater, Assistant Supply Manager, Engineering. **Main Board Directors:** Dr. J. S. Gourlay, Mr. G. K. Hampshire.

SOME INDUSTRIAL VICTORIANA (*continued from page* 43)

shop itself. The labels were on your piece of soap or on the bottles you particularly fancied.

But the 1880s—the decade of our illustrations—had further techniques of its own. Leaflets were distributed by mail-order firms, and much loose-leaf advertising matter was bound in at the ends of magazines, reviews and directories, or printed on their covers. The sandwich-man shuffled along the kerb, his boards enclosing him like oyster-shells; not so long before, he had carried his poster at the end of a pole and demanded attention by blowing a little horn.

Even on the roadway display assailed you. Flat four-wheeled carts carrying hexagonal cylinders, their sides covered with posters, trotted between the buses and hansoms, in provincial towns as well as the metropolis; and a certain little one-horse "shay" was once famous. This was shaped like an immense top hat, its driver peeping through a tiny window in front—the direct ancestor of the modern commercial motor van, its body shaped like a toothpaste tube.

From most of these appeals colour, however, was still lacking; in fact our illustrations are almost unique examples of colour printing in the 1880s. Perhaps for this very reason they have been proudly preserved for posterity in the archives.

Colour printing had tentatively appeared in France rather before the eighties. There lithography had gradually become a great process for colour printing, but was generally used for decorative prints only or for illustrations. A French artist, Jules Chéret, first applied it, in his gay little posters for the Parisian music-halls and cabarets, to advertising display. Chéret belongs to French advertising history and was the father of a great line of poster artists who flourished in the nineties. But the inspiration which he had given to the use of colour printing for this particular purpose spread gradually to both sides of the Channel, and the eighties are the first period of the colour-printed advertisement in this country.

Technical printing difficulties, however, still stood in the way, so that actually there are not many examples before the end of the 1880s. A mail-order leaflet of uncertain date, offering a rug in colour, seems to have been the earliest specimen of English colour advertising. But until, in the later nineties, the whole business world rushed into colour, similar advertisements are hard to find.

It is in this connection that these illustrations from the archives of I.C.I. have such particular interest and stand out as a part of what must almost have been pioneer work. Here, at a comparatively early date (the specimens in question are certainly no later than 1887), were advertisers who had sensed the extraordinary values of colour—its vividness and excitement, its emotional appeal, its stimulus—and their designs, as we look back on them, seem both original and daring. This was a new way of putting over the goods, with vigour and, indeed, charm.

Each advertisement has its own individual appeal. The gunpowder labels are particularly attractive, with their suggestion of the old steel engraving (the snipe and trigger) combined with background colour. The fierce fires of the Widnes Alkali Co. are startling and arresting. And the paints display card has a further technical interest, the specimens of actual colour being superimposed directly on the printed card.

NEWS IN PICTURES — Home and Overseas

Mr. Makan Budhi, *Senior Dredge Chargehand of Magadi Soda Co., Kenya, was awarded the B.E.M. in the New Year Honours List. Due to retire from the Company this year, he recently received a long service award from the Chief Secretary of Kenya*

Dr. Maurice Cook, *chairman of Metals Division, has been awarded the C.B.E. During his career with I.C.I. he has held office in many organisations associated with the metals industry, including president of the Institute of Metals, Institute of Metallurgists and the Birmingham Metallurgical Society*

Major K. M. Ellis (*Royal Military Police, T.A.*), *a Metals Division planning officer, has been awarded the M.B.E. He is chairman of the Birmingham Federation of Ex-Service Associations and is Officer Commanding No. 2 Port Task Force, Provost Company, Military Police, T.A.*

Mr. J. Forster, *Alkali Division, the B.E.M. Duri I.C.I. he has been work connected wi of polythene sinc* 1933 *to large-scale facture leading hand fitter, has been awarded ng his service with closely engaged in th the development its discovery in industrial manu- today*

Miss E. Pitkethly, *lately of Central Purchasing Department, received an M.B.E. in the New Year Honours List. Since her retirement from I.C.I. she has been very active in the W.V.S. and is deputy head of the Old People's Welfare Department*

Mr. S. P. Stotter, *a director of Plant Protection Ltd. and Controller of Fernhurst Research Station, which he founded, retired in May last year. He was awarded the O.B.E. in the New Year Honours List for services to horticulture and to the Ministry of Agriculture*

Mr. S. Wigglesworth (*Dyestuffs Division*), *who was awarded the M.B.E., is Assistant Safety Officer and Civil Defence Officer at Huddersfield Works. He joined the Company there in* 1933 *and has been active in A.R.P. and Civil Defence matters since* 1936

"High level" talk. *The Governor of Victoria, Sir Dallas Brooks, talks with Sir Alexander Fleck, I.C.I. Chairman, on Melbourne's highest habitable point—the observation platform at the top of the tower of I.C.I. House*

I.C.I.A.N.Z. milestone. *The opening of I.C.I. House, the new Chairman of I.C.I., took place on* 11*th December. Australia's tallest Melbourne. Head Office staff of I.C.I.A.N.Z., who were previously in the new building. Its construction is a fitting milestone to mark the*

I.C.I.A.N.Z. headquarters at Melbourne, by Sir Alexander Fleck, building at 275 *ft. high, it is seen here in the centre of an aerial view of scattered in different offices in the city, are now all accommodated completion of the Company's third decade.* (*See story on page* 56.)

Deep in discussion. *The Premier of Victoria, Mr. H. E. Bolte, the Minister for External Affairs, Mr. R. G. Casey, and Sir Alexander Fleck forgathered in the* 18*th floor cafeteria of I.C.I. House shortly after Sir Alexander had declared the giant building officially open*

Special honours. *Morris Service of Nobel Division received final "honours" at a special Outward Bound course held late last year. His outstanding performance, hardly won, is described as a distinctly high achievement. Expeditions on sea, over land and through mountains formed part of the course, of which he enjoyed every minute*

Severe flooding at Stowmarket. *On 7th January, after a night of torrential rain followed by snow, the River Gipping at Stowmarket in Suffolk flooded part of the land bought by Paints Division for site development of their Stowmarket factory. In addition to flooding the "weathering rack farm" the swollen river rushed through the building contractors' storage area*

New telephone system. *Queen Elizabeth is seen here with the Postmaster-General, Mr. Ernest Marples, at Bristol Telephone Exchange. She inaugurated the new automatic trunk system when she dialled the first call on the new S.T.D. (Subscribers Trunk Dialling) service. The newly designed telephone instrument she used was made of 'Diakon,' which is manufactured by Plastics Division. The G.P.O. is now providing these telephones, made by Ericsson Telephones Ltd., in a variety of colours*

Showerproof silicones. *Nobel Division makes the silicones which are used by finishers to showerproof cloths for raincoats. Here four samples of cloth, two of which have been silicone treated, were subjected to an artificial rainstorm to measure the efficiency of the showerproof process. All silicones are tested on this Bundesmann apparatus before leaving Ardeer*

New diesel loco. *Shortly before he left for Canada, Mr. P. C. Allen, president of Canadian Industries Ltd., who is a well-known railway enthusiast, unveiled the nameplate of the ninth diesel loco to be put in service at Billingham Division. He named it "Iburndale" and later drove it round the factory circuit*

Surprise packet. *Mr. A. Ashmore, 74-year-old pensioner of Alkali Division, and his wife are seen receiving a parcel of Christmas fare from Mr. E. Wrench (Middlewich Works). Employees of the works contributed towards the fund to provide parcels for each of the 104 Middlewich pensioners and widows*

'Alkathene' in India. *Our picture shows a selection of household products made from 'Alkathene' in a local Indian shop. The first polythene plant to be built in India, due to be opened early this year at the Rishra Works of the Alkali and Chemical Corporation of India, a subsidiary company of I.C.I. (India) Ltd., will make 'Alkathene,' the I.C.I. brand of polythene*

Evening in Manhattan

By A. W. Baldwin

Illustrated by Miles Chance

THE four of us eased our way out of Billie Rose's Diamond Horseshoe into the warm autumn night and stood on the sidewalk. I suppressed a yawn and glanced at my watch—12.35. It had been quite a day. My friend Sherman Grant, whose folks had obviously been strong Union partisans in the war between the States, had been my host for the evening. His wife, Lois, with her sister Sandra had added grace and charm to what would otherwise have been a dullish male party. It had all been very pleasant, and I was now more than ready to call it a day.

But I ought to have known my friend Sherman better than that. When he takes you out for a night "on the town," as he calls it, he means a night. Just that. Any attempt to break up the party half-way through the night is apt to make him feel frustrated. And I had a feeling that he was heading for frustration on this particular night—in a big way.

As I have said, I wasn't a bit keen for further jollification, and I sensed that the women had had quite enough for one evening. Sandra thought she had one of her headaches coming on, and Lois wanted to get a good night's sleep as she was to be chairwoman next day at one of her Women's Guild meetings. But Sherman pooh-poohed these objections and made a string of suggestions, including a tour of Greenwich Village and particularly Eddie Condon's. No dice.

Then he had what he considered a positively brilliant idea. We would all go to Harlem. Harlem, just the job! He was very pleased with himself. But if he thought that brainwave was going to cement the party together again he was kidding himself. In fact it wrecked it. If the women had been ever so faintly open to persuasion before, they weren't now. As far as I could gather from three people all talking at once it seemed that they had been on Harlem outings with Sherman before and wanted no part of a repeat performance. The discussion became quite crisp, and at one point Sherman turned on a nosy bystander who was taking a flattering interest in our affairs and asked him whether he would like a bust in the snoot. Sandra hailed a taxi.

Sherman snorted in exasperation and shooed us all into the taxi, saying that we might as well sit down and settle the argument in comfort. The taxi jockey couldn't care less, anyway. He had thoughtfully set his meter going. But those women were not to be moved. At last, with a sigh of exasperation, Sherman turned to me.

"Look, Al, let's drop these dames and just you and me'll go."

"Well, I don't know, Sherman, I . . ."

"Son," he said, prodding my chest with a long forefinger, "this is an opportunity you just can't afford to miss. I'll show you things in Harlem that you are not likely to run into in lil' ol' Manchester, England, on a wet Sunday."

In a moment of supreme folly, which I was to regret, I said "Well, all right," and continued to sit there wondering whether I shouldn't have my head examined. Sherman was delighted, shouted "That's my boy!" and became very brisk and businesslike, giving the cabby instructions to drop Sandra at her place and to go on to the Grant apartment, somewhere in the sixties if I remember aright. He was also beginning to show signs of the several old-fashioneds and whisky sours he had lapped up at Billie Rose's.

On arrival at the apartment a really daft argument broke out. It seems that there was only one key to the

. . . they all stopped talking and looked at us

Grant home and Lois had it. Sherman, the ever-considerate husband, wanted to let Lois into the apartment and to take the key, so that when he returned, between 4 and 5 a.m., say, he could let himself in without disturbing her. She for her part didn't mind about being disturbed, she wasn't taking one of her pills anyway, and wanted to know *when* he returned, if he ever returned. So *she* would keep the key and *he* could ring for admittance. And so it went on for minutes on end. Finally, Sherman got his own way and went up with her, saying to me "Take care of yourself, Buster, I'll be back."

I reckon the argument must have broken out again in the elevator, for Sherman was quite a while. In the meantime I sat moodily in a corner of the cab reading the interior decorations—instructions and advice to passengers. Among other things I read that our driver was one Vladimir Kolski, and a most unflattering photograph suggested that he was an escapee from Ossining. He didn't look too well from the back, come to that. A scrawny neck arose from an outsize leather jacket, and an enormous cap was prevented from swallowing his head by a magnificent pair of ears like jug handles. After a while he spoke.

"Am I to unnerstand, mister, that you an' yore friend figger on goin' to Harlem?"

"That's right, so what?"

"Well, fer my money the ladies wus right, mister. If I wus you I'd talk 'im out of it."

"Why?"

"On account of it's not healthy. That's why. Look, mister, it used ter be quite a thing to finish up an evenin' out by takin' in a few of the Harlem night

spots. But not now. It seems some folks got to behavin' sorta smart an' there was a lotta bad feelin'. Things got from bad to worse, and now no white folks goes round Harlem at night—not if they've got any sense, that is."

"You're kidding, surely."

"I'm not kiddin', mister, believe me. Why, durn it, there's not a week goes by but what there's two or three throat slittin's in that part of town. No foolin'."

This line of talk didn't help my mood a bit. He went on.

"It depends, o' course, on the way you carry on. Now take that friend of yours, for example. He's a bit of a smartypants in my book, and he's cockeyed, too."

"Oh no," I replied; "he's just feeling a bit fine and large."

"Fine an' large!" He spat expertly into the street. "High as a kite, if y'ask me."

He was about to enlarge on this theme when he spotted Sherman striding across the sidewalk towards the cab and shut up like a clam. Sherman breezed in, slammed the door, and threw himself down next to me saying "There, now, that's that. Let's go, huh?"

"Look," I said, "don't you think it's a bit late to go to Harlem? Speaking for myself, I'd just as soon have a quiet noggin in one of the nice joints round here and a bit of a chat and so to bed." It sounded a pretty flabby speech at the time. Sherman obviously had little or no use for it.

"What's all this, Al?" You're not taking any notice of them durn women, are you?"

"Good heavens, no! It's just that . . ."

"Now wait!" A thought had occurred to my friend. "It wouldn't be that a certain taxi jockey with ears like stove lids had been opening his big mouth and putting in *his* ten cents worth, would it?"

There was a pause in which I could have sworn that the unfortunate ears of driver Vladimir twitched once. He cleared his throat.

"Now see here, mister," he said. "There ain't no call to get personal. *You're* no oil painting, come to that. I just think it isn't smart for you and your friend to go to Harlem . . ."

"*You* think! Who the blazes wants to know what you think, Kolski?" He too had read the driver's identification card.

"Well, whadya say if I refuse to drive you to Harlem?" growled Vladimir.

"An wadda *you* say if I call a cop?" riposted Sherman.

"Okay, okay, okay! It's your funeral, mister." A happy choice of words, I thought. "Where to?"

"Now you're talking," said Sherman. "Small's Paradise!"

The cab leaped forward like a wild thing, headed uptown, and I sat back to speculate moodily on what I had let myself in for. Sherman leaned over and said: "So citizen Kolski here was shooting a line on the horrors of Harlem, was he?"

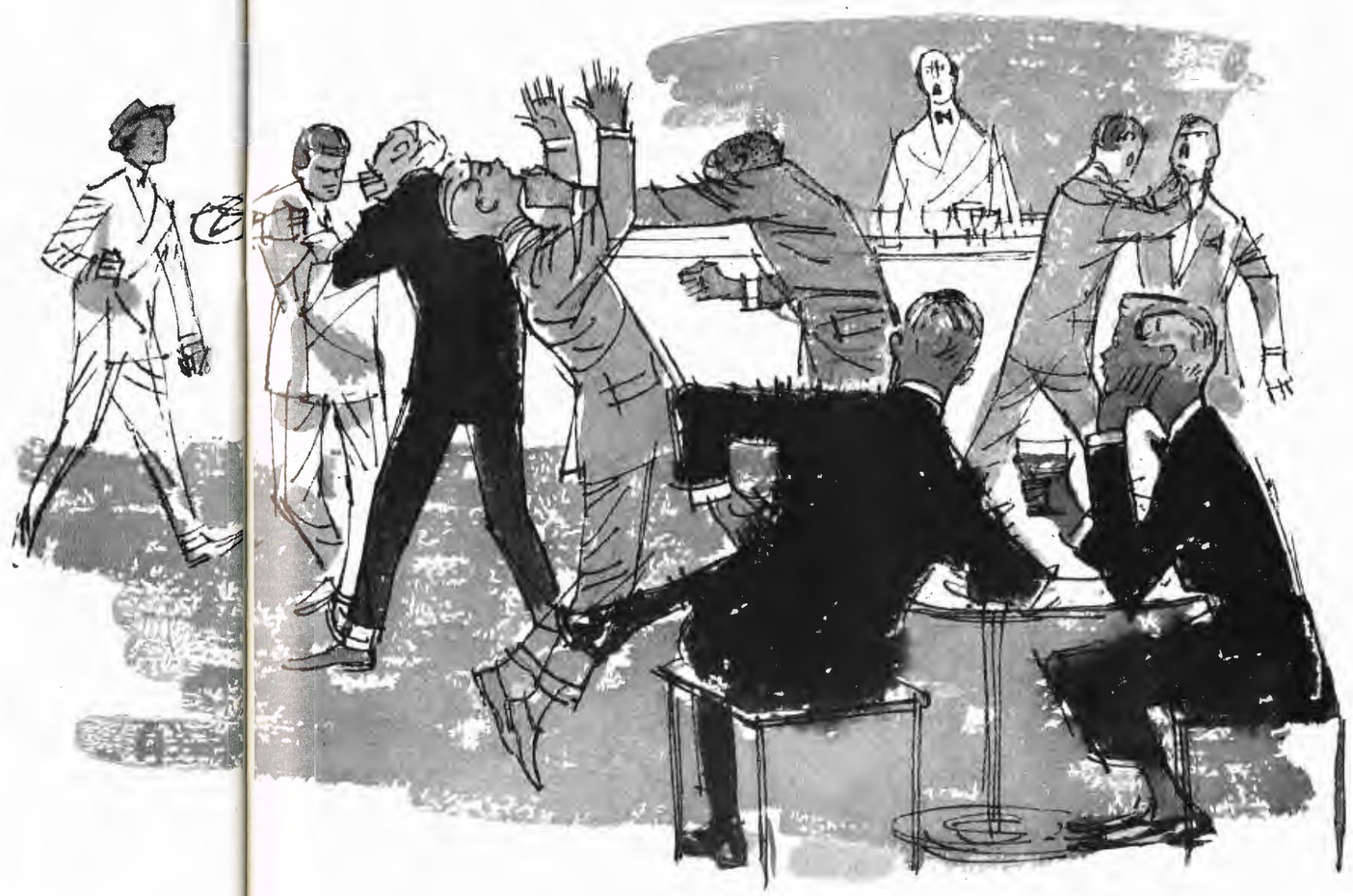
"Well, he did make a passing reference to throat slittings."

"Always exaggerated, son, believe me. Never more than three or four a week, in fact," he added, with a complacence I found it difficult to share. "And all that," he went on, "is on account of so many people, when they take a run out to Harlem, acting just plain stoopid. Now with me it's different. I go to Harlem for one reason or another several times a month, at all hours. And what's more, I am very well known in that part of town. Just leave yourself in my hands, Buster."

As the night went on, Sherman was treating me more and more like a backward ten-year-old.

We tore north along the Avenue, between the seemingly endless lines of traffic lights, one set at every corner, every now and then screaming to a stop when they were against us, then leaping forward again. It was clear that Vladimir was carrying out a distasteful chore as quickly as he possibly could with a view to getting the hell out of it back downtown again. And *that* didn't help to reassure me either.

At last, somewhere in the 120's, Vladimir made a magnificent U-turn, his tortured tyres shrieking in protest, and shuddered to a stop in front of a flashy establishment. We got out of the cab. Sherman



"I find it easier to be comfortable in a nice quiet place like this, among people I understand"

squinted at the meter and paid Mr. Kolski the exact fare as recorded thereon. Normally this would have been enough to start a small riot, but our driver was past caring about such trivia. Without wasting a glance on either of us he shot off at speed in a southerly direction out of my life for ever. I turned to examine my surroundings.

So this was Small's Paradise. The frontage occupied half a block, and it was ablaze with white light. From within came the sound of music and many voices. The voices were raised above the music, and the music was equally determined to be heard. As we stood on the sidewalk awhile, bathed in light, listening to the paradisal uproar, I noticed a chunky coloured policeman standing on the corner calmly looking us over. Having finished his leisurely bovine inspection he shifted a generous piece of chewing gum from one side of his mouth to the other, twirled his nightstick and turned to look at something else. We moved towards the gates of paradise.

As we crossed the threshold I became aware of many things all at once. First there was the music. A baby-faced negro on a small revolving dais was improvising on an electric organ. There was a microphone just above the keyboard, and there must have been scores of loudspeakers secreted about the place. The joint was literally throbbing with music, which seemed to hit you in the face, the back of the neck, behind the kneecaps and up the trouser legs.

Then there were the customers, scores of coloured

folk of all shapes and sizes and of all depths of shade. As we went in they all stopped talking and looked at us. The organist, who had also spotted us, lowered his output to the gentlest pianissimo. The effect was dramatic in the extreme and destroyed what little poise I had left. As we went towards the enormous elliptical bar in the centre of the room, a space for us appeared as if by magic. I felt that neither Danny Kaye nor Noel Coward had ever commanded the attention of an audience as completely as we were doing. I also felt I was a long way from Blackley. But it wasn't bothering Sherman.

"Where's Nick?" he asked a barman, who stood regarding us with a completely non-committal expression, saying to me in an aside "Boss of this joint."

"He's down in the basement suh, ah think, checkin' on the stock."

"Well, just you give us a coupla gin and tonics and go tell him that Sherman Grant is here. Right?" Chesty, I thought.

As I stood juggling the massive blocks of ice around in my gin and tonic I noticed that the customers were gradually taking up their interrupted conversations and slowly taking their eyes off us. But I was sure that they would swivel round on to us again at the twitch of a whisker. The organist too was pushing up the decibels, and very soon we were experiencing the damnable din that was normal for the peak spells in Small's Paradise. After a while, and a second drink, Sherman began to fidget, and spotting the barman who had served us the first, he beckoned him over.

"Where's Nick?" he bawled—one had to, to be heard at all.

"Ah'm sorry, suh," bellowed the barman in reply, "Ah bin combin' de joint. Cain't see 'im. He musta moved out some place."

"Huh! Well, when does the floor show come on?"

"No floor show tonight suh, it's Thursday. No floor show on Thursday nights."

"Thursday, nuts!" yelled Sherman, sticking his wrist under the barman's nose to show him his watch registering five minutes to two. "It's Friday!" The barman gave a wry grimace.

To my extreme consternation I noticed that we had once more become "the cynosure of neighbouring eyes," and they weren't looking all that neighbourly either. Moreover, the organist had dimmed out again. Sherman chose this moment to slap his glass down on the bar, turn to me and say "C'mon Al! Let's scram outa this crummy deadfall and go on to a real place!"

Everybody in Small's Paradise at that moment must have heard him, apart from those with defective hearing. I needed no further prompting. At every step towards the door I was fully expecting our exit to be assisted—in other words, for us to be bounced out. Nobody moved, however, but as the doors swung to behind us I heard the old familiar uproar break out anew. The clientele did not regret our passing.

Outside the Paradise, Sherman grabbed my arm and said: "I know, let's go to the Baby Grand." Sensing a lack of enthusiasm on my side, he went on: "Now, don't be a jerk. This is a real nice joint, and it's only a coupla blocks away. Why, dammit, we can *walk* there!"

What earthly difference that fact could make was beyond me, but I allowed myself to be led. I sensed that Sherman was feeling a little put out. Not a soul in Small's Paradise had recognised him, and it rankled. But it was quite different when we came at last to the Baby Grand. Standing just inside the door was an enormous coloured man in a very smart tuxedo.

"Hya, Ben!" chirruped Sherman.

"Good evening, Mistah Grant, Ah'm sho' pleased to see you again—and yo' English friend." He beamed at me. "Ah knows yo' English, suh, from the suit yo' wearin'. Nice bit of serge yo' got theah, suh," he said, gently touching my lapel.

As the genial giant led us to our table he remarked that the floor show was about to begin. I thought Sherman would burst with gratification. And there was more to come. Several people waved at us in greeting, and one or two, with their wives or girl friends, came over to exchange pleasantries and I was introduced to them. As we settled down with our drinks and the lights were dimming for the show, Sherman said "This is more like it. Can't think why we went to that Paradise place first. Musta been cockeyed."

Well, there was a great deal of hot rhythm, which Sherman loves and which I detest, and of torch singing and the like—not my cup of tea at all. I'm quite prepared to acknowledge, however, that it was all technically first rate, since, I am told, coloured people do that sort of thing very well. But I was almost bow-legged with boredom. At last the star item was announced with a drum roll and crash of cymbals.

Whatever I felt from then on it was certainly not boredom.

Into a spotlight on the small stage stepped a handsome and very shapely coloured girl in an extremely modest evening frock. She began to sing and to dance a few simple steps. I have noticed in certain American night clubs that whenever a good-looking wench comes on to the stage and demonstrates in the first few minutes that she is an indifferent singer and no great shakes as a dancer either, you can bet your dollar allowance that she is what is known in the entertainment world as a stripper. That is to say that she is following in the footsteps of the famous Gypsy Rose Lee, removing her clothing seductively, and to music, down to the limits specified by the local law. The ever-optimistic cash customers live in hopes of the law being infringed, and sometimes they are lucky.

It was soon clear to me that the gal occupying the star spot at the Baby Grand that night was a stripper. Sherman, who is not backward in such matters, realised it at the same moment and gave a hoarse cry of appreciation. I then realised that the regular patrons of the Baby Grand liked to take their strip-teasing with a good measure of decorum, and from the looks cast in our direction I could see Sherman's rating in the popularity poll falling fast. In fact, two husky citizens on the next table began staring at us, and I'd had quite enough of that at the Paradise. I put a hand on Sherman's forearm, but I might as well have patted Brooklyn Bridge for all the restraining effect I was able to achieve.

In due course, to the accompaniment of considerable vocal encouragement from Mr. Grant, the stripper approached the climax of her act. That girl was no dancer, as I have said, but as a wriggler she was near the top of Division I. Sherman began to give shrill whistles with his fingers between his teeth. That was enough. A group of large men sitting near the stage looked purposefully in our direction and got up slowly from their seats. By the greatest good fortune our friend Ben was nearby and whispered to them. They sat down even more slowly but continued looking at us. Sherman chuckled. "See what I mean, Al?" I got up.

"Hey, where are you off to?" he asked.

"Out!"

"But look, Al . . ."

"Out!" And suiting the action to the word I moved for the door.

Once again we found ourselves on the sidewalk. It was twenty minutes past three. I signalled a cruising taxi and as it drew alongside got into it.

"Look, Al, I've gotta beautiful idea," said Sherman. "What say we . . ."

"Where to, mistah?" asked the coloured taxi driver.

"Somewhere about sixty blocks downtown, somewhere in the fifties," I replied.

"Now just listen to me one moment, Al," said my friend.

"Are you coming or aren't you?" I said.

"Okay, okay!" He got in and slammed the door. As we tore down the avenue even faster than we had come up it, I explained to Sherman that my idea now was to have a final nightcap and to turn in. I was pretty tired, anyway. Could he suggest a place convenient for us both? He could. There was a bar roughly equidistant from my hotel and his apartment which was the haunt of newspaper men at this time of the day. It had indeed been a regular calling spot for the late lamented Damon Runyan, and one could occasionally see Winchell there. They also served very good Scotch. That suited me.

There was nothing remarkable about the place. But it was quiet. There were maybe fifteen to twenty men there, in good but untidy suits, hats tipped to the back of their heads, talking quietly. When the Scotch arrived I heaved a sigh of contentment.

"Suppose you're happy now," said Sherman.

"Yes," I replied.

He shook his head. "If anybody had asked me," he said, "I would of bet that you had more of the adventurous spirit than you have shown tonight, Al."

"Maybe, Sherman. I must confess to have lived a fairly sheltered life. Harlem is probably all right when you know it as you do. I dare say it looks pretty good to Sugar Ray Robinson too. But I must say I find it easier to be comfortable in a nice quiet place like this, among people I understand."

As I said this, one of the gentlemen at the bar called his neighbour an unforgivable and quite unprintable name. The man referred to replied with a crisp right hook to the jaw. In no time at all four men were involved in a vicious scuffle, and before you could say Dwight Eisenhower the whole place was in an uproar.

Fortunately we were near the door, and we slipped through it in short order. As I reached my hotel I could hear the police whistles and the sirens of the prowl cars on the mild morning air.

I Learn to Drive . . .

By Sadie Blunt

Illustrated by Martin Aitchison

"DARLING," said my husband.

My husband has three modes of address towards me. There is "Darling"—he is pleased with me; "Sadie"—he is not so pleased; and (addressed to our two sons) "Tell your mother . . . !"—he is hopping mad. But this was one of his "Darling" days. He continued: "We are two well-balanced adults, and there should be no need for friction when I am teaching you to drive."

I let my husband's pleasant logical monologue flow over me, inserting a "No" here and a "Yes" there at what I hoped were appropriate moments. This was my big day. I had always wanted to drive but we had never had a car, and car owners are a peculiar lot. They will lend, with gushing generosity, lawn-mowers, spanners and, if born sufficiently far south of the Border, even money; but ask them for the use of their car to learn to drive and it suddenly has to go in for a decoke or something equally restrictive.

However, now we did at last have our own car. She was an aged lady called Jezebel, but she was the dearest thing in the whole world to my better half.

We reached the edge of the town where a spider's web of new roads twists and winds across the green fields. My two sons, who never permit themselves to be left out of anything, sat solemnly in the back of the car as my husband and I changed seats. I fingered the wheel lovingly. Even my husband's muttered remark that he would kill me if I so much as scratched the body did not damp the elation I felt. The lesson began.

"Turn on the ignition, release the brake, depress the clutch, select first gear, and accelerate slowly," said my teacher, the words tumbling out like machine-gun bullets.

"Eh?" said I. He sighed deeply like one who has a great tragedy in his life, and repeated the formula one syllable at a time.

"There is no need to speak to me as if I had a low I.Q." I said icily, and proceeded to start the car. It leaped into demented life and projected itself forward like an impatient guided missile, then stopped dead.

"You were discussing your I.Q." said my loved one, staring ahead with a dead-pan expression.

I started the car again. This time it leapfrogged madly forward in a series of lurches. The children bumped up and down, banging their heads on the car roof. "We're kangaroos! We're kangaroos!" they yelled. My husband had covered his face with his hands in an exaggerated gesture of terror, so I stopped again.

"Is there something wrong, dear?" I said as casually as I could.

He addressed me formally by my Christian name, and informed me that apart from the fact that I had stripped his brake linings, bust his big end and exploded his shock absorbers everything was quite all right.

"Your manipulation of the clutch is too erratic," said my youngest son. I gritted my teeth. "That child has been insufferable since he passed the eleven-plus," said I; but I tried again.

"Ask your mother," said my husband in the voice he reserves for people he does not like, "to please take her foot off the throttle, or we shall end up in outer space." The throttle, the throttle—where was the throttle? He had never mentioned a throttle! "I haven't got a throttle," I said in a small voice. Like a man who has been brain-washed and lost all hope, he slumped forward, then reared up and let out a mighty shout. I took my feet and hands off everything in fright and curled up in a ball as my husband reached across and applied the brakes—and we stopped six inches from a pile of bricks.

"I agree with every word, old boy!"

My husband eventually explained that when he said "throttle" he meant "accelerator" and vice versa, that a car was not intended as a blunt instrument, and that it was he who had the low I.Q. for ever letting me take the wheel.

My self-confidence was dying a painful death, and if it had not been that it was a long walk home I would have flounced from the car and left him to his furies. Instead I started the car for the fourth time, and to my delight it went like a lamb. After that things proceeded comparatively smoothly.

Eventually I made an almost perfect gear change. All my old elation flooded back. I drove along at a daring 20 m.p.h. and my heart was full with the glory of it all.

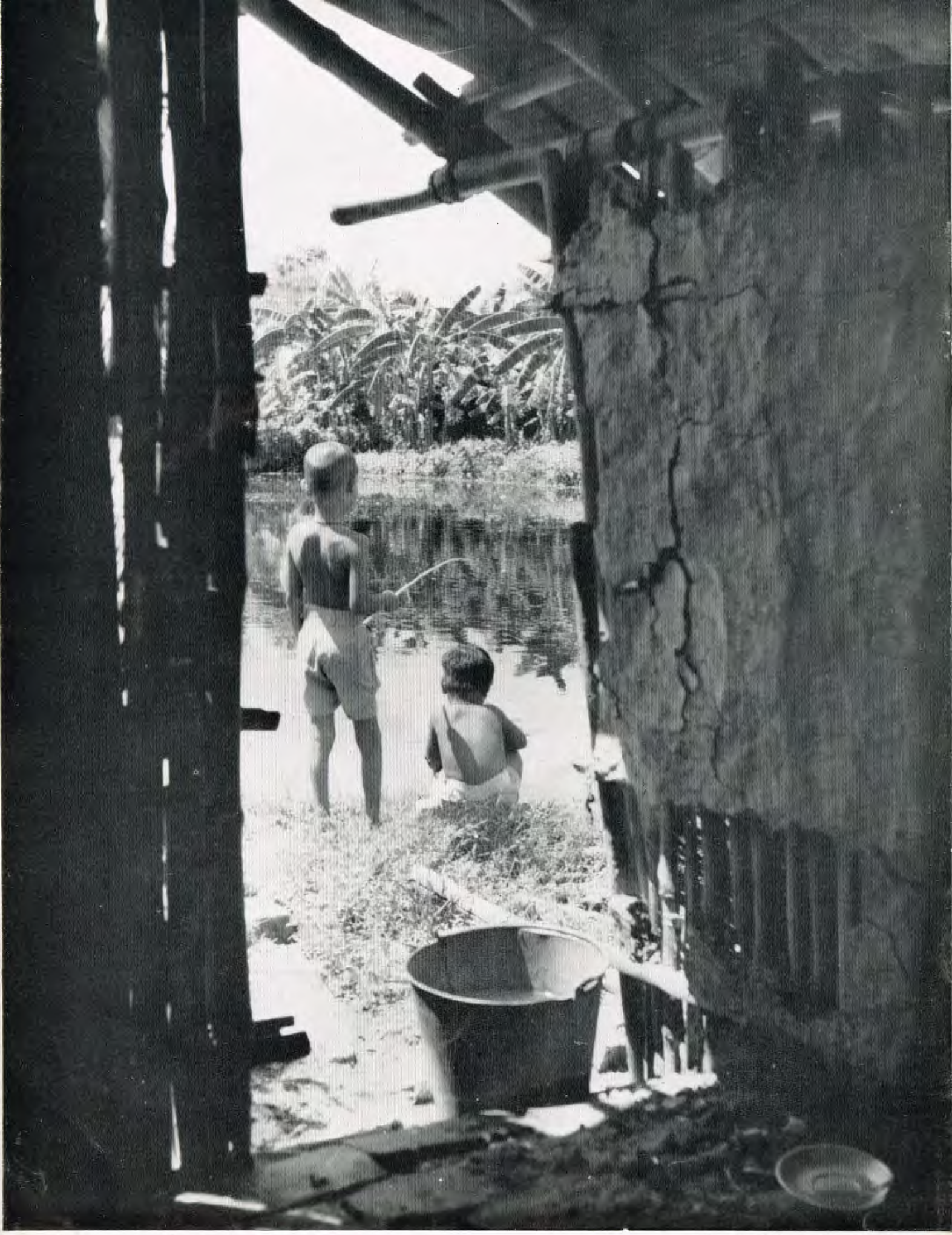
It was at this supreme moment of triumph that the steam-roller approached from afar. It trundled along in clanking majesty, driven by a bronzed and brawny-chested son of Ireland—a real broth of a boy! I suppose I should have been concentrating on the complexities of gear change, but it was such a wonderful day. The sun shone, the car purred, and I even caught an admiring glint in my husband's eye. This was living indeed!

To this day my husband and I do not agree on what he said at that moment. I swear he said "Go!" and he says he said "Whoa!", which is how one would talk to a horse anyway, and not to one's dearly beloved. Whatever he said, I put my foot down hard and the car shot forward. There was a horrible "*crump!*", the roller loomed large and high above us, and our poor little car came to rest, its nose squashed and creased like a petulant peke. One headlamp winked a sad farewell, then flickered out, and Jezebel, trembling gently, passed quietly away.

There was a stillness and quiet at her passing, then the most ear-splitting flood of Eirean blasphemy poured down from the hissing monster above us. When it had ceased, my husband took a deep breath, stuck his head through the shattered windscreen and said "And I agree with every word, old boy!"

The local scrap dealer paid us £8 for Jezebel's corpse, and that, together with twelve months' hard saving, eventually bought us a new car. I often look at it longingly, but, like Uncle Harry, who ran away with the vicar's wife, my driving lessons are something the family do not care to talk about.

Of course, I could go to a driving school. In fact, if this article is accepted I could sneak away with the money and learn to drive in secret. How surprised my dear one would be. He might even have one of his "Darling" days again!



Bengali village children fishing

Photo by Subodh Kumar Mitra (I.C.I. India)